AMENDMENTS TO THE CLAIMS

1. (Currently amended) A compound of the formula (I),

its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts and solvates,

wherein R₁, R₂, R₃, R₄, R₅, R₆, R₇, R₈, R₉, R₁₀, R₁₁ and R₁₂ are the same or different and are each independently selected from the group consisting of hydrogen, halogen, perhaloalkyl, substituted or unsubstituted linear or branched (C₁-C₃)alkyl, (C₃-C₇)cycloalkyl, (C₁-C₃)alkoxy, cyclo(C₃-C₇)alkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocyclyl, acyl, acyloxy, acylamino, monoalkylamino, dialkylamino, hydroxyalkyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, and sulfonic acids,

 R_{13} and R_{14} are the same or different and are each independently selected from the group consisting of hydrogen, substituted or unsubstituted linear or branched (C_1 - C_3)alkyl, and (C_3 - C_7)cycloalkyl, or R_{13} , and R_{14} taken together with the nitrogen atom to which they are attached, form a 6 or 7- membered heterocyclic ring, wherein the ring is unsubstituted or substituted, and optionally eentains has one, two or three double bonds or heteroatoms; and Application No. 10/518,612 Docket No.: 03108/0202224-US0 Reply to Office Action of June 13, 2007

n is an integer ranging from 1 to 2.

(Currently amended) A compound according to claim 1, which is selected from the group consisting of:

11-(2-N,N-Dimethylaminoethyl)isoindolo[2,1-a]indol-6-one;

11-[(2-N,N-Dimethylamino)ethyl]-2-fluoroisoindolo[2,1-a]indol-6-one;

11-[(2-N.N-Dimethylamino)ethyl]-2-fluoroisoindolo[2.1-a]indol-6-one hydrocloride salt:

11-[(2-N,N-Dimethylamino)ethyl]-2-fluoroisoindolo[2,1-a]indol-6-one maleic acid salt;

11-I(2-N.N-Dimethylamino)ethyl]-2-fluoroisoindolo[2,1-a]indol-6-one D.L-malic acid salt:

11-[(2-N,N-Dimethylamino)ethyl]-2-fluoroisoindolo[2,1-a]indol-6-one oxalate salt;

11-f(2-N.N-Dimethylamino)ethyll-2-fluoroisoindolo[2,1-alindol-6-one citrate salt:

11-[(2-N-cyclopropyl-N-methylamino)ethyl]-2-fluoroisoindolo[2,1-a]indol-6-one;

11-[2-N-cyclopropylaminoethyl]-2-flouroisonoindolo[2,1-a]indol-6-one;

2-Bromo-11-[(2-N,N-dimethylamino)ethyl]isoindolo[2,1-a]indol-6-one;

2-Chloro-11-[(2-N,N-dimethylamino)ethyl]isoindolo[2,1-a]indol-6-one;

z-cinoro-11-[(z-14,14-dimodiylaninio)curyr]isoindolo[z,1-a]indol-0-one,

4-Chloro-11-[(2-N,N-dimethylamino)ethyl]isoindolo[2,1-a]indol-6-one;

 $11\hbox{-}[(2\hbox{-}N,N\hbox{-}Dimethylamino)ethyl]\hbox{-}2\hbox{-}methylisoindolo[2,1\hbox{-}a]indol\hbox{-}6\hbox{-}one;$

11-[(2-N,N-Dimethylamino)ethyl]-2-methoxyisoindolo[2,1-a]indol-6-one;

11-[(2-N,N-Dimethylamino)ethyl]-4-methoxyisoindolo[2,1-a]indol-6-one;

11-[(2-N,N-Dimethylamino)ethyl]-4-trifluoromethylisoindolo[2,1-a]indol-6-one;

11-[(2-N.N-Dimethylamino)ethyl]-4-ethylisoindolo[2,1-alindol-6-one;

11-[(2-N.N-Dimethylamino)ethyl]-2.4-difluoroisoindolo[2,1-a]indol-6-one;

2,4-Dichloro-11-[(2-N,N-dimethylamino)ethyllisoindolo[2,1-alindol-6-one;

3,4-Dichloro-11-[(2-N,N-dimethylamino)ethyl]isoindolo[2,1-a]indol-6-one;

1,2,4-Trichloro11-[(2-N,N-dimethylamino)ethyl]isoindolo[2,1-a]indol-6-one;

11-[(2-N.N-Dimethylamino)ethyl]-2.4-dimethylisoindolo[2,1-a]indol-6-one:

11-[(2-N,N-Dimethylamino)ethyl]-3.4-dimethylisoindolo[2.1-a]indol-6-one;

1-Chloro-11-[(2-N,N-dimethylamino)ethyl]-4-methylisoindolo[2,1-alindol-6-one;

3-Chloro-11-[(2-N,N-dimethyl-N-acetylamino)ethyl]-4-methylisoindolo[2,1-a]indol-6-one;

11-[(2-N,N-Dimethylamino)propyl]-4-methylisoindolo[2,1-a]indol-6-one;

- 3-Chloro-11-[(2-N-methylamino)ethyl]-4-methylisoindolo[2,1-a]indol-6-one:
- 3-Chloro-11-[(2-N-methyl-N-acetylamino)ethyl]-4-methylisoindolo[2,1-alindol-6-one;
- 3-Chloro-11-[(2-N-methylamino)ethyll-2-methoxyisoindolo[2,1-alindol-6-one;
- 3-Chloro-11-[(2-N-methylamino)ethyl]-2-sulfoamidoisoindolo[2,1-a]indol-6-one;
- 3-Iodo-11-[(2-N-methylamino)ethyl]-2-methoxyisoindolo[2,1-a]indol-6-one;
- 2-Bromo-11-[(2-morpholin-1-yl)ethyl]isoindolo[2,1-a]indol-6-one;
- 2-Bromo-11-[2-(4-methylpiperazin-1-vl)ethyllisoindolo[2,1-alindol-6-one:

and its stereoisomers, its N-oxides, its polymorphs, its pharmaceutically acceptable salts and solvates

- 3. (Currently amended) A pharmaceutical composition comprising a pharmaceutically acceptable carrier, diluent or excipient and a therapeutically effective amount of a compound according to claim 1, its tautomeric forms, its stereoisomers, its geometric forms, its N-oxides, its polymorphs, its pharmaceutically acceptable salts, or solvates.
- 4. (Previously presented) A pharmaceutical composition according to claim 3, which is in the form of a tablet, capsule, powder, lozenge, suppository, syrup, solution, suspension or injectable, wherein said pharmaceutical composition is administered as a single dose or in multiple dose units.
- 5. (Withdrawn) Use of compound of general formula (I), as defined in claim 1 or a pharmaceutical composition as defined in Claim-3 for preparing medicaments.
- 6 (Withdrawn) Use of compound of general formula (I), as defined in claim 1 or a pharmaceutical composition as defined in Claim-9 for the treatment where a modulation of 5-HT activity is desired.
- 7. (Withdrawn) Use of a compound as claimed in claim 1 for the manufacture of a medicament for the treatment and/or prevention of clinical conditions for which a selective action on 5-HT receptors is indicated.

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- 8. (Withdrawn) Use of a compound as claimed in claim 1 for the treatment and/or prevention of clinical conditions such as anxiety, depression, convulsive disorders, obsessive-compulsive disorders, migraine headache, cognitive memory disorders, ADHD (Attention Deficient Disorder/Hyperactivity Syndrome), personality disorders, psychosis, paraphrenia. psychotic depression, mania, schizophrenia, schizophreniform disorders, withdrawal from drug abuse, panic attacks, sleep disorders and also disorders associated with spinal trauma and/or head injury.
- (Withdrawn) Use of a compound as claimed in claim 1 for the treatment of mild cognitive impairment and other neurodegenerative disorders like Alzheimer's disease, Parkinsonism and Huntington's chorea.
- (Withdrawn) Use of a compound as claimed in claimed for the treatment of certain GI (Gastrointestinal) disorders such as IBS (Irritable Bowel Syndrome) or chemotherapy induced emesis.
- (Withdrawn) Use of a compound as claimed in claim l to reduce morbidity and mortality associated with the excess weight.
- (Withdrawn) Use of a radiolabelled compound as claimed in claim 1, as a diagnostic tool for modulating 5-HT receptor function.
- (Withdrawn) Use of a compound as claimed in claim 1 in combination with a 5-HT reuptake inhibitor, and/or a pharmaceutically acceptable salt thereof.
- (Currently amended) A <u>pharmaceutical composition comprising a compound of the general</u> formula (I),

its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts and its pharmaceutically acceptable solvates,

wherein R₁, R₂, R₃, R₄, R₅, R₆, R₇, R₈, R₉, R₁₀, R₁₁, and R₁₂ are the same or different and are each independently selected from the group consisting of hydrogen, halogen, perhaloalkyl, substituted or unsubstituted linear or branched (C₁-C₂)alkyl, (C₂-C₇)cycloalkyl, (C₁-C₃)alkoxy, cyclo(C₃-C₇)alkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocyclyl, acyl, acyloxy, acylamino, monoalkylamino, dialkylamino, hydroxyalkyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, and sulfonic acids,

 R_{13} and R_{14} are the same or different and are each independently selected from the group consisting of hydrogen, substituted or unsubstituted linear or branched (C_1-C_3) alkyl, and (C_3-C_7) cycloalkyl, or R_{13} , and R_{14} taken together with the nitrogen atom to which they are attached, form a 6 or 7- membered heterocyclic ring, wherein the ring is unsubstituted or substituted, and optionally has one, two or three double bonds or heteroatoms; and

n is an integer ranging from 1 to 2,

for preparing a medicament and a pharmaceutically acceptable carrier.

15. (Withdrawn, Currently amended) A method for the treatment and/or prophylaxis of a elinical eenditions such as condition selected from anxiety, convulsive disorders, obsessive-compulsive disorders, migraine headache, cognitive memory disorders, ADHD (Attention Deficient Disorder/Hyperactivity Syndrome), personality disorders, psychosis, paraphrenia, psychotic depression, mania, schizophrenia, schizophreniform disorders, withdrawal from drug abuse, panic attacks, sleep disorders and else disorders associated with spinal trauma and/or head injury which comprises administering to a patient in need thereof, an effective amount of a compound of general formula (I) as elaimed in Claim.

$$R_{13}$$
 R_{10}
 R_{14}
 R_{10}
 R_{14}
 R_{14}
 R_{15}
 R

its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts and solvates.

wherein R₁, R₂, R₃, R₄, R₅, R₆, R₇, R₈, R₉, R₁₀, R₁₁ and R₁₂ are the same or different and are each independently selected from the group consisting of hydrogen, halogen, perhaloalkyl, substituted or unsubstituted linear or branched (C₁-C₃)alkyl, (C₃-C₇)eycloalkyl, (C₁-

C3)alkoxy, cyclo(C3-C7)alkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocyclyl, acyl, acyloxy, acylamino, monoalkylamino, dialkylamino, hydroxyalkyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, and sulfonic acids,

 R_{13} and R_{14} are the same or different and are each independently selected from the group consisting of hydrogen, substituted or unsubstituted linear or branched (C_1-C_2) alkyl, and (C_3-C_7) cycloalkyl, or R_{13} , and R_{14} taken together with the nitrogen atom to which they are attached, form a 6 or 7- membered heterocyclic ring, wherein the ring is unsubstituted or substituted, and optionally has one, two or three double bonds or heteroatoms; and

n is an integer ranging from 1 to 2.

16. (Withdrawn, Currently amended) A method for the treatment and/or prophylaxis of a condition selected from mild cognitive impairment, and other neurodegenerative disorders like Alzheimer's disease, Parkinsonism and Huntington's chorea which comprises administering to a patient in need thereof, an effective amount of a compound of general formula (I) as elaimed in Claim.

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its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts and solvates,

wherein R₁, R₂, R₃, R₄, R₅, R₆, R₇, R₈, R₉, R₁₀, R₁₁ and R₁₂ are the same or different and are each independently selected from the group consisting of hydrogen, halogen, perhaloalkyl, substituted or unsubstituted linear or branched (C₁-C₂)alkyl, (C₂-C₇)cycloalkyl, (C₁-C₃)alkoxy, cyclo(C₂-C₇)alkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocyclyl, acyl, acyl, acylamino, monoalkylamino, dialkylamino, hydroxyalkyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, and sulfonic acids,

 R_{13} and R_{14} are the same or different and are each independently selected from the group consisting of hydrogen, substituted or unsubstituted linear or branched (C_1-C_1) alkyl, and (C_2-C_2) cycloalkyl, or R_{13} , and R_{14} taken together with the nitrogen atom to which they are attached, form a 6 or 7- membered heterocyclic ring, wherein the ring is unsubstituted or substituted, and optionally has one, two or three double bonds or heteroatoms; and

n is an integer ranging from 1 to 2.

17. (Withdrawn, Currently amended) A method for the treatment of certain GI (Gastrointestinal) disorders a gastrointestinal disorder selected from such as IBS (Irritable Bowel Syndrome) or and chemotherapy induced emesis using a compound of general comprising administering to a patient in need thereof an effective amount of a compound of formula (I) as claimed in Claim 1

$$R_1$$
 R_2
 R_3
 R_4
 R_5
 R_5

its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts and solvates.

wherein R₁, R₂, R₃, R₄, R₅, R₆, R₇, R₈, R₉, R₁₀, R₁₁ and R₁₂ are the same or different and are each independently selected from the group consisting of hydrogen, halogen, perhaloalkyl, substituted or unsubstituted linear or branched (C₁-C₂)alkyl, (C₂-C₇)cycloalkyl, (C₁-C₂)alkoxy, cyclo(C₃-C₇)alkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocyclyl, acyl, acyloxy, acylamino, monoalkylamino, dialkylamino, hydroxyalkyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, and sulfonic acids,

 R_{13} and R_{14} are the same or different and are each independently selected from the group consisting of hydrogen, substituted or unsubstituted linear or branched (C_1-C_2) alkyl, and (C_3-C_7) cycloalkyl, or R_{13} , and R_{14} taken together with the nitrogen atom to which they are attached, form a 6 or 7-membered heterocyclic ring, wherein the ring is unsubstituted or substituted, and optionally has one, two or three double bonds or heteroatoms; and

n is an integer ranging from 1 to 2.

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18. (Withdrawn, Currently amended) A method to reduce morbidity and mortality associated with the excess weight, comprising administering to a patient in need thereof an effective amount of using a compound of general formula (I) as claimed in Claim-1

its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts and solvates.

wherein R_1 , R_2 , R_3 , R_4 , R_5 , R_6 , R_7 , R_8 , R_9 , R_{10} , R_{11} and R_{12} are the same or different and are each independently selected from the group consisting of hydrogen, halogen, perhaloalkyl, substituted or unsubstituted linear or branched (C_1-C_2) alkyl, (C_2-C_7) cycloalkyl, (C_1-C_2) alkoxy, cyclo (C_2-C_7) alkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocyclyl, acyl, acyl, acyl, acylamino, monoalkylamino, dialkylamino, hydroxyalkyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, and sulfonic acids,

 R_{13} and R_{14} are the same or different and are each independently selected from the group consisting of hydrogen, substituted or unsubstituted linear or branched (C_1-C_1) alkyl, and (C_3-C_7) cycloalkyl, or R_{13} , and R_{14} taken together with the nitrogen atom to which they are

attached, form a 6 or 7- membered heterocyclic ring, wherein the ring is unsubstituted or substituted, and optionally has one, two or three double bonds or heteroatoms; and

n is an integer ranging from 1 to 2.

- (Withdrawn, Currently amended) A process for the preparation of a compound according to claim 1 comprising a step selected from one of steps i)-iv).
 - i): cyclizing a compound of formula (II) using a Pd(0) or Pd(II) derivative as a catalyst

$$R_{1}$$
 R_{2}
 R_{3}
 R_{10}
 R_{14}
 R_{14}
 R_{15}
 R_{14}
 R_{15}
 R_{14}
 R_{15}
 R_{15}
 R_{14}
 R_{15}
 R_{15}
 R_{15}
 R_{15}
 R_{16}
 R_{17}
 R_{18}
 R_{19}
 R_{11}
 R_{12}
 R_{11}
 R_{12}
 R_{13}
 R_{14}
 R_{15}
 R_{1

wherein X is halogen,

R₁, R₂, R₃, R₄, R₅, R₆, R₇, R₈, R₉, R₁₀, R₁₁ and R₁₂ are the same or different and are each independently selected from the group consisting of hydrogen, halogen, perhaloalkyl, substituted or unsubstituted linear or branched (C₁-C₃)alkyl, (C₃-C₇)cycloalkyl, (C₁-

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C₃)alkoxy, cyclo(C₃-C₇)alkoxy, aryl, aryloxy, aralkyl, aralkoxy, <u>heterocyclyl</u>, acyl, acyloxy, acylamino, monoalkylamino, dialkylamino, hydroxyalkyl. alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, and sulfonic acids:

 R_{13} and R_{14} are the same or different and are each independently selected from the group consisting of hydrogen, substituted or unsubstituted linear or branched (C_1 - C_3)alkyl, and (C_3 - C_7)cycloalkyl, or R_{13} , and R_{14} taken together with the nitrogen atom to which they are attached, form a 6 or 7- membered heterocyclic ring, wherein the ring is unsubstituted or substituted, and optionally eentains has one, two or three double bonds or heteroatoms; and

n is an integer ranging from 1 to 2;

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ii): reacting a compound of formula (III)

$$R_{2}$$

$$R_{3}$$

$$R_{4}$$

$$R_{10}$$

$$R_{10}$$

$$R_{10}$$

$$R_{11}$$

$$R_{12}$$

$$R_{2}$$

$$R_{3}$$

$$R_{4}$$

$$R_{5}$$

$$R_{5}$$

an alkylating agent selected from the group consisting of R_{13} X, R_{14} X, and $R_{13}R_{14}$ X either in successive steps or in one step, wherein X is a leaving group,

R₁, R₂, R₃, R₄, R₅, R₆, R₇, R₈, R₉, R₁₀, R₁₁ and R₁₂ re the same or different and are each independently selected from the group consisting of hydrogen, halogen, perhaloalkyl,

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substituted or unsubstituted linear or branched (C1-C3)alkyl, (C3-C7,)cycloalkyl, (C1-C3)alkoxy, cyclo(C3-C7)alkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocyclyl, acyl, acyloxy, acylamino, monoalkylamino, dialkylamino, hydroxyalkyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, and sulfonic acids; and

n is an integer ranging from 1 to 2;

iii): reacting a compound of formula (IV)

$$R_2$$
 R_3
 R_4
 R_6
 R_8
 R_8
 R_8
 R_8
 R_8
 R_8
 R_8

wherein R₁, R₂, R₃, R₄, R₅, R₆, R₇, and R₈ are the same or different and are each independently selected from the group consisting of hydrogen, halogen, perhaloalkyl, substituted or unsubstituted linear or branched (C1-C3)alkyl, (C3-C7,)cycloalkyl, (C1-C3)alkoxy, cyclo(C3-C7)alkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocyclyl, acyl, acyloxy, acylamino, monoalkylamino, dialkylamino, hydroxyalkyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, and sulfonic acids;

with formaldehyde and a compound of formula (V)

NR13R14

(V)

wherein R_{13} and R_{14} are the same or different and are each independently selected from the group consisting of hydrogen, substituted or unsubstituted linear or branched (C_1 - C_3)alkyl, and (C_3 - C_7)cycloalkyl, or R_{13} , and R_{14} taken together with the nitrogen atom to which they are attached, form a 6 or 7-membered heterocyclic ring, wherein the ring is unsubstituted or substituted, and optionally eentains has one, two or three double bonds or heteroatoms; or

- iv): either chemically or catalytically reducing a compound of formula (I) containing a -C(=O) group in the side chain, to the corresponding -C(OH,H) or -C(H,H) containing compound.
- 20. (Withdrawn) A process according to claim 19 further comprising one or more of the following steps: i) removing a protecting group; ii) resolving a racemic mixture into pure enantiomers; and iii) preparing a pharmaceutically acceptable salt or prodrug of the compound of formula (I).

21. (Withdrawn) Novel intermediates defined of general formula (IV)

$$R_1$$
 R_2
 R_3
 R_4
 R_5
 R_6
 R_7
 R_8
 R_7
 R_8

wherein R_1 , R_2 , R_3 , R_4 , R_5 , R_6 , R_7 , and R_8 are as may be same or different and each independently represent hydrogen, halogen, perhaloalkyl, substituted or unsubstituted groups such as linear or

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branched (C₁-C₃)alkyl, (C₃-C₇)cycloalkyl, (C₁-C₃)alkoxy, cyclo(C₃-C₇)alkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocyclyl, acyl, acyloxy, acylamino, monoalkylamino, dialkylamino, hydroxyalkyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, sulfonic acids and its derivatives.

22. (Withdrawn) A process provided for the preparation of novel intermediate of the general formula (IV) which comprises of evelizing compounds of formula (VIII)

wherein, R₁, R₂, R₃, R₄, R₅, R₆, R₇, and R₈ are as defined above; X is halogeno such as chloro, bromo or iodo, using a Pd(0) or Pd (II) derivative as a catalyst.